



June 12, 2002

Summer is a time when many students and teachers look forward to vacation. It is also a time when New York City metro area students and teachers join earth and space science research teams in Summer Institutes held at NASA's Goddard Institute for Space Studies (GISS) and City University of New York colleges.

Some of these students spend their summer working with research scientists to understand the effect of humans and nature on Earth's climate. They help predict the potential for climate change and study ways to mitigate global warming and air pollution. Others explore questions beyond Earth, addressing problems about the inner-workings of our solar system, planetary atmospheres and the stars.

Please join us at the 9<sup>th</sup> Annual Research and Education Conference for the presentation of the Summer 2002 research findings, Wednesday, July 31, 2002. More than one hundred students, educators and scientists plan to introduce you to their earth and space science research. Learn about their discoveries and the value they believe these results add to scientific knowledge and public understanding and technical issues.

The likelihood that students will be prepared to deal with tomorrow's problems increases when they are involved in the process of discovery today. Research, discovery and outreach to minority students drive the Summer Institutes at GISS and CUNY's Space Science Research Alliance, MUSPIN Network Resource Training Center and City College Center for Remote Sensing Science and Technology.

On behalf of our research community that extends from GISS in Morningside Heights into junior highs, high schools and colleges throughout the New York City metro area, we hope you can attend the 9<sup>th</sup> Annual Research and Education Conference.

Regards,

*Jim Hansen*, Head  
Goddard Institute for Space Studies

*Carolyn Harris*, Director  
Institute on Climate and Planets

#### Educational Institutions Represented at the 2002 ICP and CUNY Summer Institutes

Al-Noor Academy  
A. Philip Randolph High School  
Baruch College  
Bayside High School  
Borough of Manhattan Community College  
Bronx High School of Science  
Brooklyn Technical High School  
Byram Hills High School  
Central Park East High School  
City College of New York  
Columbia University  
DeWitt Clinton High School  
Fieldston School  
Frederick Douglass Academy  
High School for Environmental Studies  
Hunter College  
John F. Kennedy High School  
Junior High #8  
LaGuardia Community College  
Medgar Evers College  
Mott Hall Junior High School  
Nassau Community College  
New Rochelle High School  
Newtown High School  
The New School University  
New York University  
PACE University  
Plainedge High School  
Saint Regis High School  
Seward Park High School  
South Shore High School  
University of British Columbia  
University of Tel Aviv  
York College



#### NASA GISS ICP SUMMER CONFERENCE 2002

NASA Goddard Institute for Space Studies  
2880 Broadway  
New York, NY 10025

Phone: 212-678-5653  
Fax: 212-678-5552  
Email: 2002icpconference@giss.nasa.gov

#### NASA Goddard Institute for Space Studies 2002 Summer Institute on Climate and Planets

and our

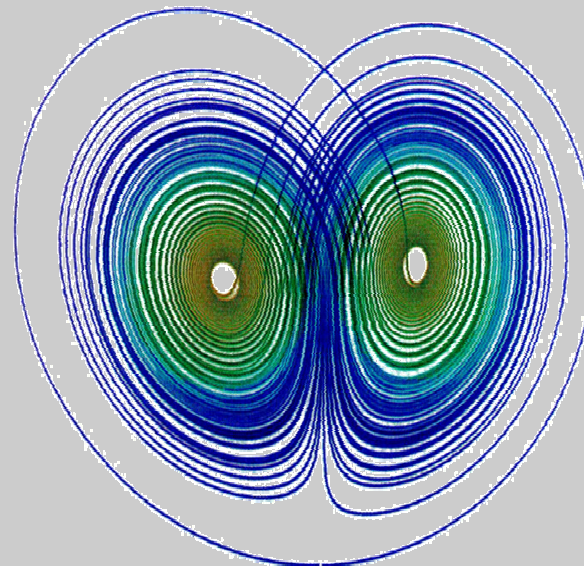
Partners in Research Education

The City University of New York  
Columbia University  
and  
SGT, Inc.

invite you to the

#### Ninth Annual Research & Education Conference

Earth and Space in the 21st Century:  
Preparing Tomorrow's Workforce by  
Involving Students in Scientific Discovery Today



Butterfly Effect: "a stirring of a butterfly in Peking can  
transform a storm next month in New York"

NASA GISS  
ICP SUMMER  
CONFERENCE  
2002

Wednesday, July 31, 2002

Alfred Lerner Hall  
Columbia University  
2970 Broadway at 114th Street  
New York, New York

## WHAT IS ICP?



In 1994 the Institute on Climate and Planets (ICP) was created, opening the Goddard Institute for Space Studies (GISS) science community to students and educators as never before by directly involving them in advancing NASA's scientific endeavor.

NASA called upon GISS to take advantage of its urban location in New York City, scientific expertise and university collaborations to help the Nation prepare a diverse and talented scientific and technological workforce.

In response, a different kind of science community was launched by Carolyn Harris, Jim Hansen, and several of his colleagues at NASA, Columbia University and the City University of New York (CUNY).

The science community now has a new look, one that represents the rich diversity of America. By recruiting students and teachers from New York City area schools and CUNY colleges to participate on research teams in a summer institute at GISS, the ethnic and racial backgrounds of our researchers now include African American, Hispanic/Latino, Asian, Caribbean, and Eastern European.

ICP involves individuals all along the path to a science career or to being scientifically literate citizens. Students and educators from junior highs, high schools, community colleges and senior colleges work along side graduate students and scientists to improve what is known about Earth's climate and global change.

It offers opportunities to get involved in current NASA research and relevant investigations at the GISS lab and on the campuses where participating educators teach science, mathematics, and engineering and technology courses. Today, a network of educators with a interest in and capability to contribute to earth and space science research is growing throughout the New York City metro area.

ICP is about giving students a "fair start" to become productive and responsible contributors to the 21<sup>st</sup> Century workforce and society. This means helping them develop 1) A global view of the world, 2) Problem-solving abilities, 3) Basic technical skills, 4) Scientific understandings about the world and 5) An ability to think about complex problems in a reasoned way.

We do this through *Research Education* – engaging students and educators in how science really works, giving them a chance to create new knowledge and apply it to current problems.

## CONFERENCE SCHEDULE

- 8:00 a.m. **Registration**
- 8:30 a.m. **NASA Welcome**  
Carolyn Harris, Director, GISS Institute on Climate & Planets  
James Hansen, Head, NASA Goddard Institute for Space Studies  
Franco Einaudi, Dir. of Earth Science, NASA GSFC
- 9:00 a.m. **Keynote Science and Technology Address**  
Jeffrey Sachs, Director, Columbia Earth Institute
- 9:45 a.m. **2002 Summer Research Highlights**

### MORNING SESSIONS:

#### Earth and Space Science Research Presentations and Posters

- 10:30 a.m. **Concurrent Research Presentations & Poster**  
*Modeling the World Ocean for Climate Prediction-ICP*  
*Climate & Carbon: Studying Carbon Sequestration in New York's Black Rock Forest*  
*Student Projects in Imaging Processing & Data Analysis in Earth & Space Science-CUNY*  
*CUNY Earth and Space Science Poster Exhibit Area*
- 11:00 a.m. **Break**
- 11:30 a.m. **Concurrent Research Presentations & Posters**  
*Energy Choices for the 21st Century-ICP*  
*Remote Sensing Science and Technology -CUNY*  
*Climate Impacts in New York City: Sea Level Rise and Coastal Floods*  
*CUNY Earth and Space Science Poster Exhibit Area*
- 12:00 p.m. **Break**

### AFTERNOON SESSIONS:

- 12:30 p.m. **Concurrent Research Presentations & Posters**  
*Storms and Climate Warming: Changes in Intensity, Cloudiness, Rainfall and Damages-ICP*  
*Climate, Aerosols & Health: Environmental Effects of Asthma Burden-ICP*  
*Global Methane Emissions: Assessing Historical Trends and Future Scenarios*  
*CUNY Earth and Space Science Poster Exhibit Area*
- 1:30 p.m. **Luncheon and Remarks**  
*Where Science, Education & Community Intersect*  
Irv Gikofsky, "Mr. G", Weatherman, WB11 News at 10  
Leon Johnson, CUNY Space Science Research Alliance  
James Harrington, NASA Minority University Space Interdisciplinary Network
- 2:30 p.m. **Recognition of ICP 2002 Student Alumni Honorees**  
*Remarks by Honorees: "ICP's Impact on Students and Teachers"*



## ICP CONFERENCE RESPONSE FORM

*Please complete and tear-off this form. Return in the envelope provided.*

NAME \_\_\_\_\_

NICKNAME: (as it should appear on your name badge): \_\_\_\_\_

TITLE: \_\_\_\_\_

ORGANIZATION: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

PHONE: \_\_\_\_\_ EXT: \_\_\_\_\_ FAX: \_\_\_\_\_

EMAIL: \_\_\_\_\_

GUEST NAME(S): \_\_\_\_\_

☐ Yes, I will attend the ICP Conference

☐ I will attend the ICP Luncheon

☐ I will only attend the AM sessions

☐ I will attend the ICP Reception

☐ I will only attend the PM sessions

☐ I regret that I am unable to attend

If you have any special needs, please list them here:

Please return this form to the address below, or you can fax it to the attention of ICP at 212-678-5552.

You may also email your response information to ICP at [2002icpconference@giss.nasa.gov](mailto:2002icpconference@giss.nasa.gov)

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